Jl. of Artificial Intelligence in Education (1994) 5 (4), 591-599

INDEX OF ARTICLES
Volumes I-V (1989-1994)

VOL. 1, NO. 1 (FALL 1989)

Editorial. *Gary Marks*, p. 3.

Viewpoint: Can Artificial Intelligence Save Educational Computing? *Greg Kearsley*, p. 5.

Knowledge Acquisition for Intelligent Instructional Systems. *Karen L. McGraw*, p. 11.

Placing Cognitive Learning Theory in Context. *Eric Bredo*, p. 27

A Simple Algebra Tutor. *M. Quigley*, p. 41.

Software-Based Access and Control of Robotic Manipulators for Severely Physically Disabled Students. *Richard D. Howell and Kenneth E. Hay*, p. 53.

Logo Programming and the Teaching and Learning of Problem Solving. *Karen Swan*, p. 73.

The Effectiveness of an Expert System and CAI in an Introductory Statistics Course. *George A. Marcoulides*, p. 93.

The PCMATH System: Empirical Investigations. *Osama Al-Kadurie and Simon Morgan*, p. 103.

European Research Review, edited by John Self: A Snapshot of ITS Research: Review of the Fourth Artificial Intelligence and Education Conference, Amsterdam, May 24-26, 1989. *Pierre Dillenbourg*, p. 121.

Book Review: PROLOG, Children and Students. *Richard Ennals*, p. 127

VOL. 1, NO. 2 (WINTER 1989/90)

Viewpoint: A Role for AI in Education: Using Technology to Reshape Education. *Roger C. Schank and Daniel J. Edelson*, p. 3.

Discourse and Dialogue: Concepts in Intelligent Tutoring Interaction. *A.M. Petrie-Brown*, p. 21.

Designing Electronic Books. *Philip Barker and Karim Manji*, p. 31.

Error Diagnosis and Fuzzy Reasoning Techniques for Intelligent Tutoring Systems. *Lois Wright Hawkes and Sharon J. Derry*, p. 43.

Knowledge-Based Systems and Work-Based Learning. *Richard Ennals,* p. 57.

Inferring Game Strategies via Computable Analysis of Players' Moves. *George W. Bright,* p. 67.

POSIT: Process Oriented Subtraction-Interface for Tutoring. *Michael A. Orev and John K. Burton,* p. 77.

Toward A Model of Instruction-Based Knowledge Acquisition: The Operational Knowledge for a Functional, Visual Programming Language. *Olaf Schroder and Klaus Kohnert,* p. 105.

International Research Review, edited by John Self: Development of European Learning through Technological Advance, p. 129.

Book Reviews, edited by George A. Marcoulides and Philip Barker: Artificial Intelligence and Education: Volume One, p. 133.

VOL. 1, NO. 3 (SPRING 1990)

Viewpoint: A Rebuttal to "A Role for AI in Education: Using Technology to Reshape Education." *Arthur A. Eggert,* p. 3.

Magnets, Martians and Microworlds: Learning with and Learning by OOPS. *Tim O'Shea, Claire O'Malley, and Eileen Scanlon,* p. 11.

Teaching Problem Solving in Mathematics and Science with Expert Systems. *Renate Lippert,* p. 27.

MENTONIEZH: A Geometry ITS for Figure Drawing and Proof Setting. *Dominique Py and Pierrick Nicolas,* p. 41.

PROLOG Microworlds. *Antonio M. Lopez, Jr.,* p. 57.

Using Expert Systems to Teach Concepts Associated with Special Education Eligibility Decisions. *Mark Thornburg, Richard Baer, Joe Ferrara, and Brad Althouse,* p. 73.

An Artificial Intelligence Approach to Second Language Teaching. *Masoud Yazdani,* p. 85.

An Integrated Computerized Tutorial Environment: A Model for Geometrical Optics. *Miky Ronen,* p. 91.

Book Reviews, edited by George A. Marcoulides and Philip Barker: Artificial Intelligence Techniques in Language Learning, p. 101; Hypertext Hands-on, p. 103; Artificial Intelligence and Intelligent Tutoring Systems, p. 105.

Vol. 1, No. 4 (Summer 1990)

Viewpoint: Theoretical Foundations for Intelligent Tutoring Systems. *John Self,* p. 3.

Teaching Machines to Read: The Artificial Intelligence/Reading Connection. *John E. McEneaney,* p. 15.

A Neural Computing Model Using Basic Matrix Algebra Concepts. *David Fowler,* p. 31.

An Attention Reduction Training Model: Educational and Technological Applications. *John W. Jacobs, John V. Dempsey, and David F. Salisbury,* p. 41.

An English-Chinese Language Learning System Using Adaptive Correction and Multipass Error Detection. *Barry L. Kurtz, Li Chen, and Xiuming Huang,* p. 51.

MATHPERT: A Computerized Learning Environment for Algebra, Trigonometry, and Calculus. *Michael J. Beeson,* p. 65.

Expert Systems as an Adjunct in Providing Behavior Management Training for Regular and Special Education Personnel. *Sheila S. Giere, Richard Baer, Joseph M. Ferrara, Mary Anne Prater, and Mark Thornburg,* p. 77.

Book Reviews, edited by Philip Barker and George A. Marcoulides: Guidelines for Screen Design, p. 89; The Design of Computer-Based Instruction, p. 90.

Vol. 2, No. 1 (Fall 1990)

Viewpoint: Intelligent Electronic Books. *Philip Barker,* p. 7.

Robot-Based Pedagogy. *Pierre Nonnon and Jean-Pierre Theil,* p. 15.

Tutorials on the Structure of Tutoring from Teachers. *Gaea Leinhardt and Stellan Ohlsson,* p. 21.

CHEMPROF—A Tutor for General Chemistry. *Arthur A. Eggert, Catherine Middlecamp, and Elizabeth Kean,* p. 47.

Logic Programming as a Theoretical Tool in Educational Research. *John E. McEneaney,* p. 63.

Graphical Treatment of Anaphora and Ellipsis within Intelligent Tutoring Systems. *Ronald A. Singer,* p. 79.

Book Reviews, edited by Philip Barker and George A. Marcoulides: Artificial Intelligence Computer-Assisted Instruction, p. 99.

Artificial Intelligence in Education Abstracts, p. 101.

VOL. 2, NO. 2 (WINTER 1990/91)

Viewpoint: Overview of Computer Assisted Learning. *Richard Ennals*, p. 5.

Automated Instructional Systems Design: A Review of Prototype Systems. *Brent G. Wilson and David H. Jonassen*, p. 17.

Graduated Learning Environments for Developing Computational Concepts in 7-11 Year Old Children. *Mike Scaife and Josie Taylor*, p. 31.

On the Use of Neural Networks in Intelligent Tutoring Systems. *Susan Mengel and William Lively*, p. 43.

Expert Systems: Using Artificial Intelligence to Support Students Doing Algebra Homework. *Ron Jacobson and Gary Smith*, p. 57.

Using Cognitive Mapping Techniques for Educating about Sexually Transmitted Diseases with an Intelligent Tutoring System. *Danny Kopec, Carol Wood, and Michael Brody*, p. 67.

An Intelligent Tutoring System for Combinatorics. *N. Lakshmipathy and J.D. Schlesinger*, p. 83.

Book Reviews, edited by Philip Barker and George A. Marcoulides, p. 105.

VOL. 2, NO. 3 (1991)

System Hacking Meets Learning Theory: Reflections on the Goals and Standards of Research in Artificial Intelligence and Education. *Stellan Ohlsson*, p. 5.

Write Environment: Using AI Strategies to Model a Writer's Knowledge of Process. *Forrest Houlette*, p. 19.

From Computer-Assisted Instruction to Intelligent Tutoring Systems. *Norman D. Livergood*, p. 39.

Methods and Rules for Integrating Databases, Object-Oriented Languages, and Rule-Based Systems. *B. Czejda, C. Eick, and M. Taylor*, p. 51.

A Network-Based Intelligent Tutoring System for Digital Logic. *Ravi Balasubramanyam, John R. Bourne, and A. J. Brodersen*, p. 63.

Intelligent Authoring Aids for Technical Instructional Materials Written in Controlled English. *J. Peter Kincaid, Calliopi D. Kincaid, J. D. Kniffin, Margaret Thomas, and Sheau Lang*, p. 77.

SAMPLE: An Intelligent Educational System for Electrical Circuits. *Alessandro Micarelli, Fabio Mungo, Francesco S. Nucci, and Luigia Aiello*, p. 83.

Book Reviews, edited by Philip Barker and George A. Marcoulides, p. 101.

Vol. 2, No. 4 (Summer 1991)

Activity with a Training Robot and the Formation of Knowledge. *P. Rabardel*, p. 3.

Programming and Problem Solving: Implications for Biology Education. *D. Ploger and M. Carlock*, p. 15.

A Neural Network Implementation for Expert Systems. *S.V. Shankam and D.H. Cooley*, p. 33.

A Unification-based Model of Perceptual Learning in Reading: Logical Foundations, Part I. *J.E. McEneaney*, p. 51.

Declarative Testing-Debugging as Tutoring. *S.Y. Yan*, p. 71.

A Puppet Robotic Theater, Constructed and Programmed by Students with the Help of the Andriod Language. *J. La Palme and M. Bélanger*, p. 81.

IPDA—An Expert System for Debugging PROLOG Programs. *M. Lee*, p. 91.

Book Reviews, edited by Phillip Barker and George A. Marcoulides, p. 103.

Vol. 3, No. 1 (1992)

A Blackboard Model for Adaptive and Self-Improving Intelligent Tutoring Systems. *Elizabeth T. Whitaker and Ronald D. Bonnell*, p. 3.

Knowledge-Based Tools and Pupils as Knowledge Engineers: A Case Study of Two Specific Learning Difficulty (Dyslexic) Pupils. *Jon Nichol*, p. 29.

A Neural Network Simulation Project. *Ingrid F. Russell*, p.41.

A New Approach to Machine Learning Systems and Its Application to the Development of an ITS. *B. Arun Kumar, K. Duraiswamy, and K. Sarukesi*, p. 51.

High Bandwidth Diagnosis Within the Framework of a Microcomputer-Based Intelligent Tutoring System. *Michael Orey, Joo-Sung Park, Lih-Juan Chanlin, Hueyching Jih, Phillip D. Gillis, Peter J. Legree, and Michael G. Sanders*, p. 63.

A Unification-Based Model of Perceptual Learning in Reading: Part 2. Computational Implementation. *John E. McEneaney*, p. 81.

Book Reviews, edited by Philip Barker and George A. Marcoulides, p. 105.

Vol. 3, No. 2 (1992)

Viewpoint: Situated Cognition: A Paradigm Shift? *Jacobijn Sandberg and Bob Wielinga*, p. 129.

Viewpoint Response: Representations of Knowing: In Defense of Cognitive Apprenticeship. *William J. Clancey*, p. 139.

Adapting Instruction to the Student's Capabilities. *Timothy S. Gegg-Hanison*, p. 169.

ITS Challenger—A Domain-Independent Environment for the Development of Intelligent Training Systems. *Marijke F. Augusteijn, Ronald W. Broome, Raymond W. Kolbe, and Robert N. Ewell*, p. 183.

A Structure and Design Method for Multiple Viewpoints. *Rod Moyse*, p. 207.

Designing Educational Software Around Questioning. *Arthur C. Graesser, Mark C. Langston, and Kathy L. Lang*, p. 235.

Book Reviews, edited by Philip Barker and George Marcoulides, p. 243.

Vol. 3, No. 3 (1992)

Explanation, Exploration, and Learning: The Use of Expert System Shells in Education. *Karen Valley*, p. 255.

Learning to Argue and Arguing to Learn: An Interface for Computer-Based Dialogue Games. *Rachel M. Pilkington, J. Roger Hartley, David Hintze, and David J. Moore*, p. 275.

The Space Shuttle Fuel Cell Tutor: A Simulation-Based Intelligent Tutoring System with Yoked Expert Systems. *Phillip C. Duncan*, p. 297.

Applying Formal Semantics to User Modelling. *P. Fung*, p. 315.

The Student Model in POSITS: A Tutor for the Factorization of Algebraic Expressions. *Antonio Gisolfi and Giuseppe Moccaldi*, p. 347.

Book Reviews, edited by Philip Barker and George A. Marcoulides, p. 359.

Vol. 3, No. 4 (1992)
Special Issue on Student Modeling

Re:Writing Cartesian Student Models. *Warren Sack, Elliot Soloway, and Peri Weingrad*, p. 381.

Using Machine Learning to Advise a Student Model. *Beverly Park Woolf and Tom Murray*, p. 401.

Inconsistent Beliefs, Attention, and Student Modelling. *Xueming Huang*, p. 417.

Constraint-Based Student Modelling. *Stellan Ohlsson*, p. 429.

A Model of the Acquisition and Improvement of Domain Knowledge for Functional Programming. *Claus Möbus, Olaf Schröder, and Heinz-Jürgen Thole*, p. 449.

Strengthening the Novice-Expert Shift Using the Self-Explanation Effect. *C. Frasson and M. Kaltenbach*, p. 477.

Modelling the Student in Sherlock II. *Sandra Katz, Alan Lesgold, Gary Eggan, and Maria Gordin,* p. 495.

Vol. 4, No. 1 (1993)

Viewpoint: Guidon-Manage Revisited: A Socio-Technical Systems Approach. *William J. Clancey,* p. 5.

Viewpoint Response: Reflections on the Intelligence of ITSs: A Response to Clancey's "Guidon-Manage Revisited." *Eric Bredo,* p. 35.

Designers Did Not Wait for Situationists: A Response to Clancey's *Viewpoint* "Guidon-Manage Revisited: A Socio-Technical Systems Approach." *Pierre Dillenbourg and Daniel Schneider,* p. 41.

Cognitive Apprenticeship—The Emperor's New Method? A Polemical Reaction to the Debate on Situated Cognition and Cognitive Apprentceship. *H. Ulrich Hoppe,* p. 49.

The Everyday Life of ONR and IRL: A Review of Clancey's Article "Guidon-Manage Revisited." *Warren Sack,* p.55.

A Macroadaptive Approach To Tutoring. *Valerie J. Shute,* p. 61.

Instructional Design and Intelligent Tutoring: Theory and the Precision of Design. *Peter Capell and Roger B. Dannenberg,* p. 95.

Vol. 4, No. 2/3 (1993)
Special Issue on Evaluation

Evaluation Methodologies for Intelligent Tutoring Systems. *Mary A. Mark and Jim E. Greer,* p. 129.

Redressing the Balance: The Advantages of Informal Evaluation Techniques for Intelligent Teaming Environments. *Michael Twidale,* p. 155.

Formative Qualitative Evaluation for "Exploratory" ITS Research. *Tom Murray,* p. 179.

The Quantitative Evaluation of Intelligent Tutoring System Applications: Product and Process Criteria. *Peter J. Legree, Philip D. Gillis, and Michael A. Orey,* p. 209.

"TALK"ing About Evaluation. *Rachel Or-Bach and Ehud Bar-On,* p. 227.

Principles for Evaluating Intelligent Tutoring Systems. *Valerie J. Shute and J. Wesley Regian,* p. 245.

A Landscape of Issues in Evaluating Adaptive Learning Systems. *Philip H. Winne,* p. 273.

VOL. 4, No. 4 (1993)

Viewpoint: Intelligent Agents and Instructional Systems: Implications of a New Paradigm. *Greg Kearsley*, p. 295.

Viewpoint Response: Differentiating Between Intelligent Tutoring Systems and Intelligent Agents. *Chris Dede and Denis Newman, p. 305.*

A Landscape of Issues in Evaluating Adaptive Learning Systems. *Philip H. Winne*, p. 309.

Academic Timetabling With a Microcomputer-Based Expert System Shell. *Maris G. Martinsons, Kwan Kong Cheong, Paul K. 0. Chow, and Victor H. Y. Lo*, p. 333.

Architectural and Planning Issues in Intelligent Tutoring Systems. *Isabel Fernández-Castro, Arantza Diaz-llarraza, and Felisa Verdejo*, p. 357.

Reasoning about Student Knowledge and Reasoning. *Luigia Carlucci Aiello, Marta Cialdea, and Daniele Nardi*, p. 397.

VOL. 5, No. 1 (1994)

Performance Support Systems: Integrating AI, Hypermedia, and CBT to Enhance User Performance. *Karen L. McGraw*, p. 3.

Deductive Error Diagnosis and Inductive Error Generalization for Intelligent Tutoring Systems. *H. Ulrich Hoppe*, p. 27.

Teaching Through Collaborative Problem Solving. *A.E. Blandford*, p. 51.

A Dynamic View on Cognitive Student Modeling in Computer Programming. *Koen Bertels*, p. 85.

A Knowledge-Based, English Verb-Form Tutor. *Edwin Bos and Joke van de Plassche*, p. 107.

VOL. 5, No. 2 (1994)

Applications of Simulated Students: An Exploraton. *Kurt VanLehn, Stellan Ohlsson, and Rod Nason*, p. 135.

QMaps: Qualitative Reasoning for Simulation Learning Environments. *Wouter Van Joolingen*, p. 177. To be reprinted with corrections in Vol. 6, No.1 (1995).

A Model for Negotiation in Teaching-Learning Dialogues. *Michael Baker*, p. 199.

Exploiting Program Schemata in an Automated Program Debugger. *Timothy S. Gegg-Harrison*, p. 255.

Vol. 5, No. 3 (1994)

The Science Education Advisor: Applying a User Centered Design Approach to the Development of an Interactive Case-Based Advising System. *Terrell N. Chandler,* p. 283.

FITS: A Framework for ITS—A Computational Model of Tutoring. *Mitsuru Ikeda and Riichiro Mizoguchi,* p. 319.

A Neural Network Approach to Automatic Recognition of Children's Handwriting. *L.M. Burns, S.C. Perkins, and D. Orth,* p. 349.

THEMIS: A Nonmonotonic Inductive Student Modeling System. *Yasuyuki Kono, Mitsuru Ikeda, and Riichiro Mizoguchi,* p. 371.

Vol. 5, No. 4 (1994)
Special Issue on Language Learning

Foreign Language Immersion: Science, Practice, and a System. *Henry Hamburger,* p. 429.

Modelling Second Language Learner Creativity. *Greg Lessard, Michael Levison, Daniel Maher, and Ivan V. Tomek,* p. 455.

ComPlex: A Tool for the Development of L2 Vocabulary Knowledge. *Michael Harrington,* p. 481.

Dealing with Pragmatic and Implicit Information in an ICALL System: The PILÉFACE Example. *Ruddy Lelouche,* p. 501.

Intelligent Computer Assisted Language Learning As Cognitive Science: The Choice of Syntactic Frameworks for Language Tutoring. *Clive Matthews,* p. 533.

Individualization Within a Multi-Agent Computer-Assisted Learning-To-Read Environment. *Annie Chambreuil, Michel Chambreuil, and Chihab Cherkaoui,* p. 557.